

**BLM OREGON POST-FIRE RECOVERY PLAN
EMERGENCY STABILIZATION AND BURNED AREA
REHABILITATION**

PLAN TEMPLATE 2010

BIG WINDY FIRE (HS0E)

BLM Medford District Office

OREGON STATE OFFICE

FIRE BACKGROUND INFORMATION

Fire Name	Big Windy
Fire Number	LFESHS0E0000 / LFB RHS0E0000
District/Field Office	Medford District Office
Admin Number	LLORM00000
State	OREGON
County(s)	CURRY, JOSEPHINE
Ignition Date/Cause	07/26/2013 Lightning
Date Contained	09/30/2013
Jurisdiction	<i>Acres</i>
State	6
USFS	71
Private	9
BLM	28242
Total Acres	28328
Total Costs	\$332,000
Costs to LF2200000 (2822)	\$49,000
Costs to LF3200000 (2881)	\$283,000

Status of Plan Submission (check one box below)

X	Initial Submission of Complete Plan
	Updating or Revising the Initial Submission
	Amendment

PART 1 - PLAN SUMMARY

BACKGROUND INFORMATION ON FIRE.

The Big Windy Fire

R.9W.), located approximately twelve miles west-northwest of the town of Merlin, Oregon was one of several fires resulting from lightening that occurred on July 26, 2013. Initially there were three separate fires in that area that resulted from the lightning storm. They were the Big Windy Fire, the Calvert Peak Fire, and the Windy 16 Fire. These fires later grew together. The fire burned in steep, rugged terrain between the Wild Section of the Rogue River on the northern boundary and areas burned by the Biscuit Fire of 2002 on the southern boundary. The area has been designated as Late-Successional Reserve and to large extent is unroaded. The area within the fire perimeter (28,328 acres) is comprised of BLM managed lands (28,242 acres), US Forest Service managed lands (71 acres), privately managed lands (9 acres), and State of Oregon managed lands (6 acres). The fire burned within mixed-evergreen stands of predominantly Douglas-fir and tanoak. Other species include ponderosa and sugar pine, incense cedar, western red cedar, Port-Orford-cedar, madrone and chinkapin. The fire burned at varying severities. From the BARC data, 301 acres burned at a high severity, 2,721 acres burned at a moderate severity. 2747 acres burned at a low severity, and the remaining 22,559 acres burned at a very low severity or did not burn. There were approximately 900 acres of young managed stands (age 2-34 years) that burned at a high severity. In addition to wildlife habitat values being at risk, there was concern for recreational/visual values being lost if the fire burned to the Rogue River or spotted across to the northern bank. At times the Rogue River was closed to the public. At times there was a concern that the Big Windy Fire and the Douglas Complex Fire would burn together. The Big Windy Fire shares some contingency lines with the Douglas Complex.

While the Big Windy Fire occurred almost entirely on BLM managed public lands, some US Forest Service managed lands are within the perimeter. The ESR Plan ID Team sought and received comments/concerns from the USFS. Forest Service employees evaluated "their" portion of the fire and had no fire-related concerns to be included in this plan.

LAND USE PLAN CONSISTENCY

S5 - Noxious Weeds ES Issue 5

All herbicide treatments will adhere to the BLM list of approved chemicals (most recent list updated September, 2011). Herbicide use would follow application procedures described in the chemical manufacturer's label and would be in conformance with the Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States Programmatic Environmental Impact Statement (PEIS) and the Record of Decision for Vegetation Treatments Using Herbicides on BLM Lands in Oregon (2010).

All proposed treatments are in conformance with these additional existing BLM policies and

plans:

- Medford District Record of Decision and Resource Management Plan (1995)
- Medford District Integrated Weed Management Plan (1998)
- BLM Manual 1740—Renewable Resource Improvements and Treatments

S8 - Road/Trail Water Diversion ES Issue 2

Proposed treatments are consistent with Medford District RMP (1995). Road Maintenance BMPs (p. 163-164) list culvert and ditch cleaning as practices that maintain roads in a manner that protects water quality and minimizes erosion and sedimentation. The proposed actions are consistent with the Medford District Road Maintenance Categorical Exclusion 2012-2016. DOI-BLM-OR-M000-2012-0001-CX.

S9 - Cultural Protection (Stabilization/Patrol) ES Issue 4

Propose actions address the need to protect sensitive cultural resources that were damaged by the fire or that are at risk following the fire. Page 71 of the Medford District RMP (1995) gives objectives and direction on the management of cultural resources on the District. Fulfillment of government-to-government and trust responsibilities to American Indian Tribes regarding heritage and religious concerns is an objective. Protection from wildfire is included in the direction.

S10 - Tree Hazard Removal ES Issue 1

Page 72 of the Medford District RMP (1995) lists as one of the reasons timber falling and removal can be done regardless of the land use allocation is to, "Provide for the safety of forest users (including removing hazard trees along roads and trails, in camp grounds, and administrative sites, etc.)" Proposed actions are consistent with the Medford District Emergency Stabilization and Rehabilitation Categorical Exclusion FY2013-2016. DOI-BLM-OR-M000-2013-001-CX.

S13 - Monitoring ES Issue 1

Appendix L. Monitoring and Evaluation of the Approved Resource Management plan (pgs. 225-248 of the ROD) describes in detail specifics on activities within the RMP that are to be monitored and gives monitoring objectives. Broad objectives for monitoring are: to ensure activities are occurring in conformance with the plan; to determine if activities are producing the expected results; and to determine if activities are causing the effects identified in the PRMP/FEIS. Implementation monitoring and effectiveness monitoring are part of the RMP and are part of the ESR plan.

R4 - Seedling Planting BAR Issue 3

The Medford District RMP (1995) states, "Conifer planting would be done where appropriate to assure that reforestation objectives are promptly met." (page 184 Appendix E. Silvicultural Systems Utilized in the Design of the Resource Management Plan.) The section describes treatments that would occur to meet RMP objectives that include wildlife habitat. Prompt reforestation of these lands are a critical part of wildlife habitat objectives. The Revised Recovery Plan for the Northern Spotted Owl, recovery action 12 encourages post-fire silvicultural activities, such as planting, that restore habitat elements that take a long time to develop (page III-49). Proposed actions are consistent with the Medford District Categorical Exclusion 2012 Silvicultural Practices-Reforestation, Young Stand Management, and Forest Condition Restoration Treatments (FY12-FY17). DOI-BLM-OR-M070-2011-09-CX.

R5 - Noxious Weeds BAR Issue 2

See S5, ES issue 5.

R13 - Monitoring BAR Issue 3

Appendix L. Monitoring and Evaluation of the Approved Resource Management plan (pgs. 225-248 of the ROD) describes in detail specifics on activities within the RMP that are to be monitored and gives monitoring objectives. Broad objectives for monitoring are: to ensure activities are occurring in conformance with the plan; to determine if activities are producing the expected results; and to determine if activities are causing the effects identified in the PRMP/FEIS. Implementation monitoring and effectiveness monitoring are part of the RMP and are part of the ESR plan.

COST SUMMARY TABLES

Emergency Stabilization (LF2200000)

Action/ Spec #	ES Issue #	Planned Action	Unit (Acres, WMS, Number)	# Units	Unit Cost (If Appl.)	FY 2013	FY 2014	FY 2015	FY 2016	Totals by Spec.
S1		Planning (Project Management)				\$0.00	\$8,000.00	\$0.00	\$0.00	\$8,000.00
S2										
S3										
S4										
S5	5	Noxious Weeds	Acres	3,500	\$2.07	\$0.00	\$7,000.00	\$0.00	\$0.00	\$7,000.00
S6										
S7										
S8	2	Road/Trail Water Diversion	Miles	11	\$931.82	\$0.00	\$10,000.00	\$0.00	\$0.00	\$10,000.00
S9	4	Cultural Protection (Stabilization/Patrol)	WMS	2	\$8,000.00	\$0.00	\$16,000.00	\$0.00	\$0.00	\$16,000.00
S10	1	Tree Hazard Removal	Miles	72	\$55.56	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
S11										
S12										
S13	1	Monitoring	#	1	\$4,000.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
S14										
TOTAL COSTS (LF2200000)						\$0	\$49,000	\$0	\$0	\$49,000
OTHER FUND CODE TOTALS:										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

Burned Area Rehabilitation (LF3200000)

Action/ Spec #	BAR Issue #	Planned Action	Unit (Acres, WMs, Number)	# Units	Unit Cost (If Appl.)	FY 2013	FY 2014	FY 2015	FY 2016	Totals by Spec.
R1		Planning (Project Mgmt)				\$0.00	\$0.00	\$2,000.00	\$2,000.00	\$4,000.00
R2										
R3										
R4	3	Seedling Planting	Acres	700	\$370.66	\$0.00	\$137,000.00	\$64,000.00	\$58,000.00	\$259,000.00
R5	2	Noxious Weeds	Acres	7,000	\$1.57	\$0.00	\$0.00	\$6,000.00	\$6,000.00	\$12,000.00
R6										
R7										
R8										
R9										
R10										
R11										
R12										
R13	3	Monitoring	#	1	\$8,000.00	\$0.00	\$0.00	\$4,000.00	\$4,000.00	\$8,000.00
R14										
TOTAL COSTS (LF3200000)						\$0	\$137,000	\$76,000	\$70,000	\$283,000
OTHER FUND CODE TOTALS:										
TOTAL COSTS (???)										
TOTAL COSTS (???)										
TOTAL COSTS (???)										

PART 2 - POST-FIRE RECOVERY ISSUES

EMERGENCY STABILIZATION ISSUES

1 - Human Life and Safety

Portions of the Big Windy Fire occurred along a BLM Backcountry Byway and a road that connects interior valleys with the coast. These roads are used by sight-seers and people wanting a shorter way (although sometimes slower), more scenic route to the coast. Hunters and other public also use roads within fire perimeter. In places, the fire burned to the Rogue River or near it. The Rogue River in this area is part of the Wild and Scenic River System and is heavily used by rafters and fishermen. Hazard trees near established camping areas were created by the fire. Potential injury resulting from falling snags and debris is a concern.

2 - Soil/Water Stabilization

There is potential for increased sedimentation as a result of the wildfire. The fire occurred on moderate to steep slopes (generally 35-60%) in an area that receives 35-65+ inches of precipitation annually with the majority occurring between September and May. There is expected to be a period of increased water flow into ditchlines and streams following the removal of vegetation by the fire. The first wet season after the fire is the primary concern. Some debris flow into previously functioning culverts and ditches is expected occur. Improperly functioning culverts and ditches could cause erosion and sedimentation to increase. Soils are not highly erodible but concentrated flows over roadways could result in road failure and fill material being washed downstream.

3 - Habitat for Federal/State Listed, Proposed, or Candidate Species

N/A

4 - Critical Heritage Resources

Cultural resource concerns are present but are minor. There are known sites within the fire perimeter and recent ground disturbance associated with suppression activities. Threats to cultural resources are primarily theft.

5 - Invasive Plants and Weeds

Non-native invasive species and noxious weeds are present within the burn area. Invasive species and noxious weeds are recognized as posing threats to biological diversity, second only to direct habitat loss and fragmentation. Invasives and noxious weeds are known to alter ecosystem functions such as nutrient cycles, hydrology, and wildfire frequency; to outcompete and exclude native plants and animals; and to hybridize with native species. Noxious weeds and non-native invasive species that have been identified to exist in and adjacent to the burn area include false brome, bull thistle, Canada thistle, Himalayan blackberry, Scotch broom, Spanish broom, spotted knapweed, and tansy ragwort.

BURNED AREA RECOVERY ISSUES

1 - Lands Unlikely to Recover Naturally

N/A

2 - Weed Treatments

Noxious weed concerns within the second and third years of the plan (as well as additional out-years) are the same as for first year stabilization. Populations of noxious weeds were present prior to the fire. Noxious weeds populations are also present outside of the fire perimeter. There is a concern that noxious weed populations will colonize or expand into areas disturbed by the fire.

3 - Tree Planting

GIS analysis indicates that of the almost 27,000 acres within the Big Windy Fire perimeter, approximately 900 acres of young plantations (2-34 years of age) burned at a moderate or high severity. Little or no live conifer stocking is expected to remain on most of these acres. Seedling and sapling mortality in some areas is expected to be near 100%. An additional 2100 acres of older stands (35+ years of age) within the fire perimeter also burned at a moderate or high severity.

Lands within the Big Windy Fire perimeter are designated as Late-Successional Reserves (LSR) in the RMP. Achievement of land management objectives is dependent upon the presence of forest stands that contain high percentages of conifer species. The LSR land use allocation has objectives that require late-successional forest conditions to develop or be maintained. Limited natural regeneration will likely occur in some areas but cannot be depended upon to result in a desired mix of conifer and hardwood species. Without planting most sites will become dominated by sprouting hardwoods and germinating shrub species. Sugar pine, ponderosa pine, and Douglas-fir were lost in the fire. Western red, Port-Orford, and incense cedar were also lost. Sugar pine will not regenerate in sufficient numbers to be a meaningful component of future stands. Sugar pine is also susceptible to white pine blister rust, an introduced pathogen. In this area, natural sugar pine seedlings generally do not survive. Nursery grown sugar pine seedlings are produced with seed from trees selected for their resistance to the disease and are much more likely to survive.

Ponderosa pine likewise will not naturally regenerate in desired numbers. Seed sources on the site are scarce and pine does not compete well with established hardwoods and shrubs. Douglas-fir and incense cedar may eventually out-compete hardwoods and shrubs. Recent studies suggest that with anticipated climate change natural regeneration of desired species at warm and dry low elevation sites such as these may be reduced. (Conifer regeneration following stand-replacing wildfires varies along an elevation gradient in a ponderosa pine forest, Oregon, USA. E.K. Dodson, H.T. Root / Forest Ecology and Management 302 (2013) pgs. 163-170.)

4 - Repair/Replace Fire Damage to Minor Facilities

N/A

PART 3 - DESCRIPTION OF TREATMENTS

Issue 1 - Human Life and Safety

S10 Tree Hazard Removal

A. Treatment/Activity Description

Hazard trees would be felled along roads where recently fire killed or trees likely to die as a result of the fire are present. If possible trees in excess of coarse woody debris guidelines would be sold and removed. Within the River Corridor, hazard trees that may affect established campsites would be evaluated. A strategy for managing risk associated with any identified hazards would be developed, consistent with the guidance found in the Wild and Scenic Rivers Act, the Rogue River Management Plan, and Agency policy. Funding would primarily be for evaluation and contract administration costs and that the cost of falling salable trees when applicable would be the responsibility of the purchaser. It is expected that some falling of non-merchantable trees would be required. At this time it is estimated that the number of hazard trees that would be felled is less than five hundred.

B. How does the treatment relate to damage or changes caused by the fire?

Treatment would focus on trees killed by the fire and those that will likely die within two years.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Treatment would be done to prevent loss of life or injury to people. Treatment attempts to recover value from hazard trees to reduce costs.

S13 Monitoring

A. Treatment/Activity Description

Monitoring treatments would be done as described in individual treatment sections. Monitoring would determine whether hazard tree removal, road/trail water diversion, cultural protection, and noxious weed treatments were implemented and were effective. Monitoring costs for these treatments are summarized in this section, S13.

B. How does the treatment relate to damage or changes caused by the fire?

Monitoring proposed by the ESR plan is that associated with proposed ES treatments. The Big Windy Fire changed site conditions to a point where treatments are proposed to address ES issues. Monitoring would be done to determine if treatments were implemented and objectives were met. A determination of success would be made for each of the treatments proposed.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Monitoring is required on all Emergency Stabilization and Rehabilitation plans. The level of monitoring required for ES&R projects is to be commensurate with the complexity of the project, level of concern, and the objectives in the plan. (ES&R Handbook, H-1742-1). Monitoring to determine treatment effectiveness is cost effective as it helps provide a basis in determining whether continued implementation of a treatment should be done.

Issue 2 - Soil/Water Stabilization

S8 Road/Trail Water Diversion

A. Treatment/Activity Description

Treatment would consist of an assessment of culverts and ditchlines within the fire perimeter for proper functioning condition. Focus would be on areas where moderate to severe burning occurred and where water that drained from these areas could affect roads. Culvert inlets and ditchlines would be cleared of rocks and debris to prevent water diversions over road surfaces causing erosion and damage. While roads adjacent or downstream of areas that were burned at high or moderate intensity would have the highest priority for treatment, areas that could channel water to these sites would also be evaluated and treated as needed. An estimated eleven miles of road falls into this category.

B. How does the treatment relate to damage or changes caused by the fire?

Rocks and debris may have become unanchored during the fire and rolled downhill into culvert inlets and ditches.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Plugged culverts and filled ditchlines can result in water flowing over road surfaces making them erode. Plugged culverts can cause a loss of portions of the road and its fill will be delivered to a stream degrading water quality.

Issue 4 - Critical Heritage Resources

S9 Cultural Protection (Stabilization/Patrol)

A. Treatment/Activity Description

Cultural Protection work would consist of resource assessment (not an in-depth survey) of the Big Windy Fire. In addition to any new sites found, known sites would be monitored to assess damage and avoid further impacts. Archeological reports and SHPO/Tribal Consultation would be done. Appropriate protection measures would be planned and implemented as needed. It is anticipated that patrols by law enforcement personnel would also be a primary activity.

B. How does the treatment relate to damage or changes caused by the fire?

Disturbance from the fire and fire suppression activities may have exposed cultural resources and left them susceptible to further damage or looting. Sites of importance are known to be within the fire perimeter.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Activity requires very little time to complete yet satisfies BLM direction and Cultural Resource Protection laws.

Issue 5 - Invasive Plants and Weeds

S5 Noxious Weeds

A. Treatment/Activity Description

1. Conduct short-term monitoring in FY2014 using early detection and rapid response (EDRR) assessment/monitoring of noxious weed/non-native invasive plant species infestations within the burned area. Monitoring to determine the post-fire presence or spread of invasive species will be conducted. ES funds would focus on lands with the highest potential for weed/invasive colonization. Those areas would primarily be lands that had moderate to high burn severity and along roads leading to those areas.
2. Inventory/assessment, photos and map new noxious weed infestations within burned area using GPS technology and upload into the Medford District BLM database as well as the Bureau NISMS databases.
3. Chemical treatments using pickups, UTVs/ATVs and backpack spray units will be used on any noxious weeds located within the fire on public lands. Coordination with County Departments of Agriculture and or other land owners will be conducted on noxious weeds found on non-BLM lands inside and outside of the burn perimeter.

B. How does the treatment relate to damage or changes caused by the fire?

The fire is a disturbance that provides a receptive avenue for the spread of noxious weeds and/or invasive species. Noxious weeds and non-native invasive species are a concern for biodiversity. Weed invasion is a potentially threatening process leading to competition and habitat modification. Plant communities and native species likely to be at greatest risk from weed invasion are those which occupy weed-prone habitats, such as riparian zones and disturbed areas adjacent to and near existing weed infestations. On the Big Windy Fire, disturbances caused by suppression forces (dozer lines, drop points, etc.) and transportation routes (roads and trails) are the main vectors for noxious weed invasion. This treatment mitigates this risk by allowing for an early means of detecting new noxious weed occurrences and a quick response for control. This treatment is necessary to prevent the establishment and to control the spread of new noxious weeds and non-native invasive species into the burned area. Chemical treatment of new and existing noxious weed infestations will reduce the likelihood of their spread to disturbed areas and help to re-establish high quality wildlife habitat within the burn.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

The priority areas proposed for noxious weed/invasive species monitoring and EDRR are very susceptible to invasion. Existing populations of noxious weeds are now adjacent to non-infested areas that are devoid of surface vegetation. The BLM Noxious Weed and Invasive Weed Treatment Program identified strategies for the inventory and treatment of noxious weeds and invasive species. A program of early detection and rapid response to control new infestations is cost effective because it helps to prevent new weed and invasive species invasions from becoming large and too expensive to control.

Issue 2 - Weed Treatments

R5 Noxious Weeds

A. Treatment/Activity Description

In fiscal years 2015-2016, high probability areas for weed infestations (areas of high burn severity and along roads) that were inventoried in fy2014 would receive follow-up inventories/evaluations. It is anticipated that follow-up treatments will be required on a subset of what was treated during fy2014 and new infestations of high-priority species. Treatments will involve the application of BLM-approved herbicides using backpack sprayers and hydraulic sprayers mounted on UTVs or trucks. Plants will be hand-pulled on sites where herbicide use may not be appropriate. Treatments will be accomplished by contractors, through existing assistance agreements, and by BLM personnel.

B. How does the treatment relate to damage or changes caused by the fire?

Site conditions will continue to be susceptible to noxious weed and invasive plant species colonization. Roadways will continue to be open. Resprouting shrubs and hardwoods, germinants of species such as ceanothus spp., and seeding from nearby plants will just begin to capture sites at year three. Sites will not be occupied by native vegetation until sometime after year three. See S5.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Treatment of noxious weeds is generally not a one time event. Seeds of noxious weeds (as well as other plants) can remain viable in the soil for years. Repeated treatments to prevent the development of seed banks is less costly than continued treatments until seed banks have been depleted. Treatments of small populations is less costly than treatment of large populations. See S5.

Issue 3 - Tree Planting

R4 Seedling Planting

A. Treatment/Activity Description

At this time, planting of conifer seedlings is proposed for approximately 500 acres of plantations burned by the Big Windy Fire (Approximately 200-400 of the 900 acres that were in young stand conditions may not be plant-able due to access or safety concerns.) An initial planting of an estimated 150 acres would be completed in FY 2014 followed by 350 acres of planting in FY 2015. The third year will anticipate approximately 200 acres of inter-planting or replanting where stocking levels are not sufficient to meet objective of late-successional habitat development without large future expenses. A range of 400-600 seedlings per acre would be planted. Planting would incorporate any surviving conifers that have a reasonable chance of survival. Seedling mix would be predominantly Douglas-fir (60%) with the remainder being ponderosa pine, rust-resistant sugar pine, and incense cedar. (Ponderosa pine seed has been limited in recent years. If a sufficient amount of ponderosa pine seed is not available, other site appropriate "minor" conifer species such as rust-resistant sugar pine and incense cedar would be substituted.) Upon further review, Port-Orford-cedar would also be considered for planting in areas that are at low risk for obtaining and/or spreading the root disease associated with Port-Orford-cedar (POC). Planting of POC would adhere to the guidelines put forth in the Management of Port-Orford-cedar in Southwest Oregon Final Supplemental Environmental Impact Statement (2004). Maintenance brushing of 120 acres is also projected for the third year of

the ESR plan. The remaining 2100+ acres of thirty-five year and older stands that burned at a moderate to high severity would be evaluated for ability to meet long-term management goals. It is anticipated that several hundred of these acres would also be planted depending on access and safety concerns. Funding for planting of areas other than burned plantations would be from other sources.

B. How does the treatment relate to damage or changes caused by the fire?

Conifer stands are a critical part of meeting wildlife habitat objectives. Late-successional forest stands are particularly important to wildlife, such as the northern spotted owl. Forest stands that were late-successional habitat that would have, within the next 10-20 years, been able to contribute to the recovery of the northern spotted owl were burned by the Big Windy Fire. Planting of conifer seedlings would allow selected conifer species to be put on the site and help ensure that future stands contain desired species composition.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Treatment is designed to place stands on developmental trajectories so that wildlife habitat that contains desired stand components can develop. Treatment design also allows for a large number of future management options to be possible. Treatment design allows for the possibility of late-successional habitat to develop over the next 80-100 years rather than hoping sufficient conifers seed-in and then out-compete established hardwoods and shrubs over a much longer time period. Planting and treatment costs are those currently in a competitively bid service contract. Planting at higher densities is a strategy that lowers the risk of incurring higher costs to establish conifers in stands dominated by shrubs and hardwoods. It also helps maintain sufficient stocking levels due to natural mortality of planted seedlings.

R13 Monitoring

A. Treatment/Activity Description

Monitoring treatments would be done as described in individual treatment sections. Monitoring would determine whether seedling planting and noxious weed treatments were implemented and were effective. Monitoring costs for these treatments are summarized in this section, R13.

B. How does the treatment relate to damage or changes caused by the fire?

Monitoring proposed by the ESR plan is that associated with proposed BAR treatments. The Big Windy Fire changed site conditions to a point where rehabilitation treatments are proposed to address BAR issues. Monitoring would be done to determine if treatments were implemented and objectives were met. A determination of success would be made for each of the treatments proposed.

C. Why is the treatment/activity reasonable, within policy, and cost effective?

Monitoring is required on all Emergency Stabilization and Rehabilitation plans. The level of monitoring required for ES&R projects is to be commensurate with the complexity of the project, level of concern, and the objectives in the plan. (ES&R Handbook, H-1742-1). Monitoring to determine treatment effectiveness is cost effective as it helps provide a basis in determining whether continued implementation of a treatment should be done.

PART 4 - DETAILED TREATMENT COST TABLE

Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY13	FY14	FY15	FY16	Total Cost
S1	Planning (Project Management)								
1	Planning (Project Management)	WM'S	1	\$8,000.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$8,000.00
	Total			\$8,000.00	\$0.00	\$8,000.00	\$0.00	\$0.00	\$8,000.00
S5	Noxious Weeds ES Issue 5								
1	Weed Treatments	WM'S	1	\$8,000.00	\$0.00	\$2,000.00	\$0.00	\$0.00	\$2,000.00
2	Weed Treatments	Acres	3,500	\$1.50	\$0.00	\$5,250.00	\$0.00	\$0.00	\$5,250.00
	Total			\$8,001.50	\$0.00	\$7,000.00	\$0.00	\$0.00	\$7,000.00
S8	Road/Trail Water Diversion ES Issue 2								
1	Culvert / Ditch Cleaning	WM'S	1	\$8,000.00	\$0.00	\$2,000.00	\$0.00	\$0.00	\$2,000.00
2	Culvert / Ditch Cleaning	Miles	11	\$750.00	\$0.00	\$8,250.00	\$0.00	\$0.00	\$8,250.00
	Total			\$8,750.00	\$0.00	\$10,000.00	\$0.00	\$0.00	\$10,000.00
S9	Cultural Protection (Stabilization/Patrol) ES Issue 4								
1	Post-fire assessment / SHPO, Tribal Consultation	WM'S	2	\$8,000.00	\$0.00	\$16,000.00	\$0.00	\$0.00	\$16,000.00
	Total			\$8,000.00	\$0.00	\$16,000.00	\$0.00	\$0.00	\$16,000.00
S10	Tree Hazard Removal ES Issue 1								
1	Hazard Tree Removal	WM'S	1	\$8,000.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
	Total			\$8,000.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
S13	Monitoring ES Issue 1								
1	Monitoring	WM'S	1	\$8,000.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
	Total			\$8,000.00	\$0.00	\$4,000.00	\$0.00	\$0.00	\$4,000.00
ES	Grand Total			\$48,751.50	\$0.00	\$49,000.00	\$0.00	\$0.00	\$49,000.00
Action / Spec #	Action Description	Unit Type	# Units	Unit Cost	FY13	FY14	FY15	FY16	Total Cost
R1	Planning (Project Mgmt)								
1	Planning (Project Management)	WM'S	1	\$8,000.00	\$0.00	\$0.00	\$2,000.00	\$2,000.00	\$4,000.00
	Total			\$8,000.00	\$0.00	\$0.00	\$2,000.00	\$2,000.00	\$4,000.00
R4	Seedling Planting BAR Issue 3								
1	Seedling Planting	WM'S	3	\$8,000.00	\$0.00	\$8,000.00	\$8,000.00	\$4,000.00	\$20,000.00
2	Seedling Cost	Each	350,000	\$0.30	\$0.00	\$105,000.00	\$0.00	\$0.00	\$105,000.00
3	Seedling Planting (Contract)	Acres	500	\$161.00	\$0.00	\$24,150.00	\$56,350.00	\$0.00	\$80,500.00
4	Seedling Maintenance	Acres	120	\$298.00	\$0.00	\$0.00	\$0.00	\$35,760.00	\$35,760.00
5	Seedling Interplanting	Acres	200	\$91.00	\$0.00	\$0.00	\$0.00	\$18,200.00	\$18,200.00
	Total			\$8,550.30	\$0.00	\$137,000.00	\$64,000.00	\$58,000.00	\$259,000.00
R5	Noxious Weeds BAR Issue 2								
1	Weed Treatment	WM'S	1	\$8,000.00	\$0.00	\$0.00	\$2,000.00	\$2,000.00	\$4,000.00

2	Weed Treatments	Acres	7,000	\$1.00	\$0.00	\$0.00	\$3,500.00	\$3,500.00	\$7,000.00
	Total			\$8,001.00	\$0.00	\$0.00	\$6,000.00	\$6,000.00	\$12,000.00
R13	Monitoring BAR Issue 3								
1	Monitoring	WMS	1	\$8,000.00	\$0.00	\$0.00	\$4,000.00	\$4,000.00	\$8,000.00
	Total			\$8,000.00	\$0.00	\$0.00	\$4,000.00	\$4,000.00	\$8,000.00
BAR	Grand Total			\$32,551.30	\$0.00	\$137,000.00	\$76,000.00	\$70,000.00	\$283,000.00
Project	Grand Total			\$81,302.80	\$0.00	\$186,000.00	\$76,000.00	\$70,000.00	\$332,000.00

PART 5 - SEED LISTS

DRILL SEED

AERIAL SEED

SEEDLINGS

Seedling Species	Scientific Name	Acres of Seedlings planted.	# of Seedlings per Acre	Total # of Seedlings	Cost / Seedling	Total Cost
Douglas Fir	Pseudotsuga menziesii	700.0	260	182,000	\$ 0.30	\$54,600.00
Ponderosa pine	Pinus ponderosa	700.0	20	14,000	\$ 0.30	\$4,200.00
TOTALS:		1,400.0	280	196,000		\$58,800.00

PART 6 - NATIVE/NON-NATIVE PLANT WORKSHEET

A. Proposed Native Plants in Seed Mixtures (Both ES & BAR Treatments)

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?

Yes No Rationale:

Native plant seed adapted to the ecological sites in the burned area is available. Seeding of native plants is not proposed as part of this ESR Plan. Seedlings will be grown from seed from an appropriate seed zone and elevation.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?

Yes No Rationale:

Native seed for Douglas-fir seedlings is available to meet projected need. Ponderosa pine seed has been limited in recent years. If a sufficient amount of ponderosa pine seed is not available, other appropriate "minor" conifer species such as sugar pine and incense cedar will be substituted. Seedling development is a one or two year process depending on type of seedling desired. Levels and timing of proposed planting reflect availability of seedlings.

3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and Plan objectives?

Yes No Rationale:

Seedlings for proposed ESR treatments will be grown under contracts and/or agreements that have established costs for seedling production. These costs were negotiated to be fair to the Government as well as the Contractor/Grower. Quality standards for seedlings are determined by the Government.

4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?

Yes No Rationale:

With proposed treatments, seedlings will survive in sufficient numbers to meet long-term management objectives.

5. Will the existing or proposed land management practices (e.g. wildlife populations, recreation use, livestock, etc.) maintain the seeded native plants in the seed mixture when the burned area is re-opened?

Yes No Rationale:

Achievement of RMP objectives is dependent upon the presences of site-appropriate conifer stands. Actions are designed to promote or maintain these stands.

B. Proposed Non-native Plants in Seed Mixtures (Both ES & BAR Treatments)

1. Is the use of non-native plants necessary to meet objectives, e.g., consistent with applicable approved field unit management plans?

Yes No Rationale:

The use of non-native plants is not necessary to meet objectives. Non-native plants are not proposed for use.

2. Will non-native plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?

Yes No Rationale:

Non-native plants are not proposed for use in this ESR Plan. Non-native plants, if substituted for the native plants proposed for use, would not meet the objectives for which they were planted without diminishing diversity and disrupting ecological processes. Note: Native plants that were not appropriate to the site (incorrect seed zone or elevation) also may not meet the objectives for which they were planted.

3. Will non-native plants stay on the site they are seeded and not significantly displace or interbreed with native plants?

Yes No Rationale:

Non-native plants are not proposed for use.

C. Proposed Seed Species - Native & Non-Natives (Both ES & BAR Treatments)

Non-native Plants	Native Plants
	Douglas Fir (<i>Pseudotsuga menziesii</i>)
	Ponderosa pine (<i>Pinus ponderosa</i>)

PART 7 - COST-RISK ANALYSIS

A. Probability of Treatments Successfully Meeting Objectives

Action/ Spec #	ES Issue #	Planned ES Action (LF2200000)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
S5	5	Noxious Weeds	Acres	3500	\$7,000.00	95%
S8	2	Road/Trail Water Diversion	Miles	11	\$10,000.00	90%
S9	4	Cultural Protection (Stabilization/Patrol)	WM'S	2	\$16,000.00	100%
S10	1	Tree Hazard Removal	Miles	72	\$4,000.00	99%
S13	1	Monitoring	#	1	\$4,000.00	100%
					\$41,000.00	
Action/ Spec #	BAR Issue #	Planned BAR Action (LF3200000)	Unit (acres, WMs, Number)	# Units	Total Cost	% Probability of Success
R4	3	Seedling Planting	Acres	700	\$259,000.00	90%
R5	2	Noxious Weeds	Acres	7000	\$12,000.00	95%
R13	3	Monitoring	#	1	\$8,000.00	100%
					\$279,000.00	

B. Cost Risk Summary

1. Are the risks to natural resources and private property acceptable as a result of the fire if the following actions are taken?

Proposed Action Yes No Rationale for Answer:

Yes. ES issue of Human Life and Safety is addressed by hazard tree removal along roads within the fire perimeter and within selected areas along the Rogue River. ES issue of Soil/Water Stabilization is addressed by assessing the functionality of culverts and ditchlines within the fire perimeter and clearing those that are blocked so that large amounts of water do not run across roadways. ES issue of Critical Heritage Resources is addressed by an assessment of cultural resources with the fire perimeter, consultation with SHPO and the Tribes, protection measures if necessary, and patrol of the area by Law Enforcement. ES issue of Invasive plants and Weeds is addressed by assessing the burned area for noxious weeds followed by treatment of weeds found. BAR issue of Weed Treatments is addressed by treatments of noxious weeds. BAR issue of Tree Planting is addressed by tree planting of selected areas that burned at a high or moderate intensity. The proposed treatments, as designed, have been successful in the past.

No Action Yes No Rationale for Answer:

No action within the Big Windy Fire would not address any of the ES or BAR issues.

Alternative(s) Yes No Rationale for Answer:

n/a

2. Is the probability of success of the proposed action, alternatives or no action acceptable given their costs?

Proposed Action Yes No Rationale for Answer:

The proposed action has been designed to address ES and BAR issues. Treatments as designed have a high probability of success, projected costs of treatments to be done under contract are market based, and the treatments themselves incorporate elements designed to reduce future ESR and non-ESR costs.

No Action Yes No Rationale for Answer:

While the cost of no ESR action is less than the proposed action, the probability of ES and BAR issues being addressed without active management is near zero. Risk of loss of life would not be reduced. Hazard trees would remain. Risk of resource value loss or damage would not be reduced. There would be a much higher chance of damage to roads and the resultant increase in sedimentation. Cultural resources would be at a greater risk of theft or damage. Noxious weed populations would increase. Forest stands of desired composition and structure would not develop as quickly as desired or possibly not at all.

Alternative(s) Yes No Rationale for Answer:

n/a

3. Which approach will most cost-effectively and successfully attain the objectives and therefore is recommended for implementation from a Cost/Risk Analysis standpoint?

Proposed Action

Alternative(s)

No Action

Comments:

The proposed action is recommended.

C. Risk of Resource Value Loss or Damage

No Action - Treatments not Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil				X	
Weed Invasion					X
Unacceptable Loss of Vegetation Diversity				X	
Unacceptable Loss of Vegetation Structure				X	
Unacceptable Disruption of Ecological Processes				X	
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life	X				
Other-loss of Access Road Due to Plugged Culverts				X	

Proposed Action - Treatments Successfully Implemented

Resource Value	N/A	None	Low	Med	High
Unacceptable Loss of Topsoil			X		
Weed Invasion			X		
Unacceptable Loss of Vegetation Diversity			X		
Unacceptable Loss of Vegetation Structure			X		
Unacceptable Disruption of Ecological Processes			X		
Off-site Sediment Damage to Private Property			X		
Off-site Threats to Human Life	X				
Other-loss of Access Road Due to Plugged Culverts			X		

PART 8 - MONITORING PLAN

S5 - Noxious Weeds - ES Issue 5

Identify the objective of the treatment:

Noxious weeds have been identified and recorded within the burned area. It is expected that these weeds will expand their range as a result of the fire. Since these weed species are not uniformly distributed across the burn area, a quantifiable objective cannot be determined until the first year inventory occurs.

The objective for the first growing season is to conduct an inventory of the burn area. Any noxious weeds detected during the inventory would be treated. The objective for the second and third years is to decrease the acreage of noxious weeds needing treatment as compared to the first year.

Describe how implementation will be monitored:

During the first growing season treatment, locations of noxious weed populations (by species), treatment type, and the amount of herbicide used would be documented using GPS and GIS. The second and third year objective would be measured by the number and size of locations sprayed and the amount of herbicide utilized. Record of chemical used, rate of application and other PUP required information would be recorded for submission to the State Weed Coordinator at the end of the contract period. Treatments by BLM crews or personnel will likewise be recorded and submitted. Mapping would be input into the NISMS database.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Size and location of noxious weed populations and needed treatments would be compared between years one, two and three to determine treatment effectiveness. If noxious weed populations remain in the burned area beyond the third year, responsibility would be transferred to local Botanist/Ecologists for ongoing inventory, treatment and monitoring using funding sources other than ES&BAR.

S8 - Road/Trail Water Diversion - ES Issue 2

Identify the objective of the treatment:

Culverts and ditchlines would be cleaned to reduce the flow of runoff water across roadways during and after rain events. Objective is to ensure that culverts and ditches are in a condition that runoff water does not cut channels into roadways or fillslopes.

Describe how implementation will be monitored:

Implementation of the treatment would be monitored by BLM personnel. Culverts and ditchlines will be checked to see if they are free of obstructions.

Describe how effectiveness will be monitored, how it will be measured, and within

what time period:

Roads within the fire perimeter would be driven after the first period of heavy rain. Areas where water flowed across roadways and cut channels would be noted. Treatment would be considered successful if one or fewer cut channels greater than six inches deep were found within the treated area after the first rainy season. Channels that resulted from factors such as improper culvert design/placement or new slides would not be considered in the evaluation.

S9 - Cultural Protection (Stabilization/Patrol) - ES Issue 4**Identify the objective of the treatment:**

The objective of the activity would be to assess the area affected by the fire for damage or potential damage/loss of cultural resources; to complete required consultation with the Oregon State Historic Preservation Office (SHPO) and Tribes; and to complete required reports. Completion of steps needed to protect cultural resources, if necessary, is also an objective.

Describe how implementation will be monitored:

Activity would be done by BLM personnel or BLM approved contractor.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Activity would be considered effective if assessment, consultation, and reports are completed within the first year. If cultural resource protection is necessary, its completion would also be part of whether or not this activity was effective.

S10 - Tree Hazard Removal - ES Issue 1**Identify the objective of the treatment:**

The objective of tree hazard removal is to reduce the risk to public and agency personnel safety.

Describe how implementation will be monitored:

Implementation would be monitored by BLM personnel to determine if hazard trees were removed as specified.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

The treatment would be considered effective if an assessment of hazard trees present within the fireline was done, trees determined to be hazardous were felled, and there were no deaths or injuries from falling trees within the three year ESR period.

S13 - Monitoring - ES Issue 1**Identify the objective of the treatment:**

Monitoring of proposed treatments would be done to determine if individual treatments had been implemented and if the treatments had been effective in addressing the ES issues. Estimated costs are summed in this category S13 to indicate a total monitoring cost.

Describe how implementation will be monitored:

Implementation of treatments will be monitored as described in the Tree Hazard Removal, Road/Trail Water Diversion, Cultural Protection, and Noxious Weed Treatment monitoring sections.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Effectiveness monitoring of treatments completed will be as described in the Tree Hazard Removal, Road/Trail Water Diversion, Cultural Protection, and Noxious Weed Treatment monitoring sections.

R4 - Seedling Planting - BAR Issue 3

Identify the objective of the treatment:

Planting of seedlings would be done to reestablish conifer stands in a shorter time frame than that which would occur with natural regeneration. Habitat, soil stabilization, and displacement of potential noxious weeds along with meeting other RMP objectives are prime considerations. Monitoring would be done to determine early regeneration success, to determine the adequacy of conifer stocking levels and distribution on planted areas to meet land use management objectives and plan assumptions within the three year ESR timeline. For the purposes of determining a successful planting treatment, stocking standards will tier to the standard for Matrix lands. Stocking standards for young stands, particularly stands of unestablished conifers, within LSRs have not been developed or agreed upon. The Matrix land standard considers stands that are at a precommercial thinning age (generally 15-25 years of age, when seedlings are established and in a condition where survival is not a factor in meeting objectives) that have 176+ well-spaced conifers per acre (80% of 220 trees per acre) as meeting target stocking standards. ESR plans are for three years. A planting that resulted in 176+ well-spaced conifer seedlings at age three would be considered successful if all of those trees survived to precommercial thinning age. However, at the end of year three seedlings are not beyond the point of maximum juvenile mortality. An analysis of plantations (in the 0 to 30 year age class) within the Big Windy Fire perimeter (totaling 897 acres), indicated that despite additional silvicultural treatments to promote survival, 43% of those units had been planted two or more times. Additional treatments designed to promote survival included mulching (11% of acres), tubing (28% of acres), shade carding (8% of acres) and maintenance brushing (79% of acres). An analysis of units within both Medford District and Roseburg District portions of the Douglas Complex Fire yielded similar results. Planting success under the ESR plan would be judged by the number of seedlings per acre and their distribution on the site after planting at one and three years. If a determination of stocking indicated that there were 176+ well-spaced conifer seedlings per acre that were in a condition (health, vigor, relatively free of interfering conditions, etc.) that replanting would not be recommended then the ESR planting would be considered successful.

Describe how implementation will be monitored:

Tree planting would be done through service contracts. BLM personnel would be CORs and PIs. Implementation would be monitored by the inspection procedure described in the planting contract. This procedure consists of inspection of planted seedlings on non-permanent plots distributed throughout the area planted.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Following planting (30 days or more) and prior to the onset of the dry season, a post-planting survey would be done on sample of each of the seedling lots planted. The purpose of this survey is to determine the quality of seedling lot prior to any stress related mortality resulting from heat or lack of moisture. The survey would be done by taking a count of the number of live, dead, and marginal trees within a sample of planted seedlings from each lot. High numbers of dead seedlings at this time indicate substandard seedling quality and a possible replant situation.

Stocking surveys at years one and three to determine conifer stocking would be done according to the BLM Regeneration Stocking Survey Handbook 5705-1. A series of non-permanent plots would be placed across planted units. A percent stocking would be determined and from that a count of well-spaced conifers would be calculated. Conditions of planted seedlings would be noted and a determination of whether or not an inter-planting or replanting was necessary to meet land management objectives would be made.

At the end of the three year ESR time period, management and monitoring of planted Big Windy units would become part of the resource area's Forest Development Program.

R5 - Noxious Weeds - BAR Issue 2**Identify the objective of the treatment:**

The objective of noxious weed treatments are to : 1) continue weed control work completed under S5, 2) assess areas likely to have populations of noxious weeds to locate new weed populations, 3) treat recently discovered and other known weed populations, 4) reduce or at least not increase the extent of noxious weeds within the fire perimeter.

Describe how implementation will be monitored:

Assessment of areas likely to have populations of noxious weeds will be done by BLM personnel. Implementation of noxious weed treatments will be through services contracts and will be monitored by BLM Project Inspectors or treatments will be done by BLM employees. Inspection will be as specified in the contract. Records of chemical used, rates of application, and other Pesticide Use Proposal (PUP) required information would be recorded for submission to the State Weed Coordinator at the end of the contract period. Any treatments by BLM crews or personnel will likewise be recorded and submitted. Weed treatments will be input into the NISMS database.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Treatment effectiveness will be monitored by BLM personnel. An ocular estimate of the

percentage of noxious weeds killed by the treatment will be made after the treatment is complete. Estimates of the area occupied by noxious weeds will be made after the second and third year treatments. These estimates will be compared to the pre-fire estimate to determine if the extent of noxious weeds increased.

R13 - Monitoring - BAR Issue 3

Identify the objective of the treatment:

Monitoring of proposed treatments would be done to determine if individual treatments had been implemented and if the treatments had been effective in addressing the ES issues. Estimated costs are summed in this category R13 to indicate a total monitoring cost.

Describe how implementation will be monitored:

Implementation of treatments will be monitored as described in the Noxious Weed and Seedling Planting Treatment monitoring sections.

Describe how effectiveness will be monitored, how it will be measured, and within what time period:

Effectiveness monitoring of treatments completed will be as described in the Noxious Weed and Seedling Planting Treatment monitoring sections.

PART 9 - MAPS

1. Vicinity / Location Map - Map 1 - Big Windy Vicinity / Location Map
2. Jurisdiction - Map 2 - Big Windy Jurisdiction Map
3. - Map 3 - Big Windy Soil Burn Severity Map
4. - Map 4 - Big Windy Land Use Allocation Map
5. Treatments - Map 5 Big Windy Treatments

PART 10 - REVIEW, APPROVALS, and PREPARERS

TEAM MEMBERS

Position	Team Member (Agency/Office)	InitialDate	
Team Leader	Jim Brimble (BLM Medford - GPRA)		
Co-Team Leader / Silviculture	Sarah Davison (BLM Medford - GPRA)		
Fisheries	Jon Raybourn (BLM Medford - GPRA)		
Hydrology / Soils	Colleen Dulin (BLM Medford - GPRA)		
Cultural Resources / Archeology	Merry Haydon (BLM Medford - GPRA)		
Wildlife Biology	Jason Reilly (BLM Medford - GPRA)		
Engineering / Roads	Cindy Wedekind (BLM Medford - GPRA)		
Outdoor Recreation Planner	Phil Rheiner (BLM Medford - GPRA)		
Other Technical Specialists	Joni Brazier (USFS (US Forest Service) Rogue - Siskiyou NF)		
Other Technical Specialists	Otis Blankenship (USFS (US Forest Service) Rogue - Siskiyou NF)		

PLAN APPROVAL

The Agency Administrator is responsible for developing, implementing, and evaluating emergency stabilizations and rehabilitation plans, treatments and activities. 620 DM 3.5C

FIELD OFFICE MANAGER

DATE

FUNDING APPROVAL

The funding of ES treatments is approved through the appropriate administrative approval level in coordination with the National Office Budget Shop. As funding is available, ES funding requested within a plan that totals below \$100,000 may be approved by the State Director, while ES funding of \$100,000 and above must be approved by the WO. If the ES funding cap is reached, all ES funding will be approved through the National Office in coordination with State ES&R Coordinators to determine highest priority projects. Funding of all BAR treatments is accomplished through a scoring process and is dependent on accurate entries into NFPORS. All funding is approved and allocated on a year-by-year basis.